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EXAMINER

GORT, E

ART UNIT

PAPER NUMBER

3618

DATE MAILED: 02/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/403,205

Applicant(s)

BRIDGES, NORMAN

Examiner

Elaine Gort

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Drawings

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s):

A leaf spring (claims 10 and 11);

A U-shaped leaf spring (claim 11);

A torsion spring (claim 12);

A coil torsion spring (claims 13 and 14);

A helical or spiral coil (claim 14);

Wheels arranged in co-axial pairs (claim 25); and

A compression spring of compressed gas (claim 9).

No new matter should be entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9-14, 22 and 25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 9-14, enablement lacks regarding how a compression spring with a chamber of compressed gas having a piston, a leaf spring, a u-shaped leaf spring, a coil torsion spring in torsion, a helical or spiral coil spring, and a torsion spring work in the invention.

Regarding claim 25, enablement is lacking regarding how the wheels are arranged in co-axial pairs on the body of the carriage.

Regarding claim 22, enablement is lacking on how the "abutment stops are adjustable whereby to adjust the said maximum excursion position of a wheel" .

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3, 4, 6-9, 16, 20-22 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in claim 3, line 3 what is meant by "varies in direction with a variation in the magnitude of the excursion from a static load position."

It is unclear in claim 4, line 2 what is meant by "in which the said constraining means comprise one or more trailing arm for respectively carrying each wheel." For purposes of this action it is assumed this means each wheel has its own at least one trailing arm supporting the wheel.

It is unclear in claim 6, line 8 what is meant by "wherein the next position of each arm can be varied." For purposes of this action it is assumed this means the arm position can be adjusted.

Claim 7 recites the limitation "the resilient action" in line 2. There is insufficient antecedent basis for this limitation in the claim.

It is unclear in claim 16, line 3 what is meant by the resilient suspension being "substantially undamped."

It is unclear in claim 20, line 4 what is meant by "locating member held in place by frictional engagement with a fixed part of the carriage" It is further unclear what is meant by "or a member carried thereby."

It is unclear in claim 21, line 2 what is meant by "abutment stops". For purposes of this action it is assumed the abutment stops are referred to in figure 5 by reference 48—abutment block.

It is unclear in claim 22, line 2 how the "abutment stops are adjustable whereby to adjust the said maximum excursion position of a wheel."

It is unclear in claim 26, line 2 what is "secured fixed and attached to a boot for receiving and supporting the foot of a user."

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1-6, 15-17, 19-24 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Burns et al. (US Patent 5,823,543).

Burns et al. discloses in figure 2, and on the attached marked-up copy of figure 2, regarding claim 1, a carriage for a roller skate in which each wheel is independently suspended on the carriage by a resilient suspension which includes means for constraining the wheel to follow a predetermined path with respect to a body of the carriage upon deflection of the resilient suspension, wherein the path includes a component of motion directed towards the rear of the carriage with respect to the direction of travel thereof;

Regarding claim 2, wherein the path of movement of a wheel upon displacement of the suspension is non-linear;

Regarding claim 3, wherein the path of the suspension travel of a wheel varies in direction with a variation in the magnitude of the excursion from a static load position;

Regarding claim 4, wherein the constraining means comprise one or more trailing arms for respectively carrying each wheel;

Regarding claim 5, wherein the orientation of each trailing arm in its rest position can be varied;

Regarding claim 6, wherein the constraining means comprise one or more pivoted arm for respectively carrying each wheel, wherein the next position of each arm can be varied;

Regarding claim 15, wherein the suspension for each wheel includes a resilient member acting both to exert a resilient biasing force urging the wheel towards one end of its path of suspended travel with respect to the carriage and as a wheel guide member at least partly defining the path of the travel of the wheel;

Regarding claim 16, wherein the resilient suspension of each wheel thereof is substantially undamped;

Regarding claim 17, wherein the wheels are carried by respective pivoted trailing arms mounted for rotation about respective axes pivoting substantially parallel to the axis of rotation of the wheel carried thereby;

Regarding claim 19, wherein the resilient force acting on each wheel is independently adjustable by respective adjustment means;

Regarding claim 20, wherein the adjustment of the resilient suspension force is effected by adjustment of the angular position of a locating member held in place by frictional engagement with a fixed part of the carriage or a member carried thereby;

Regarding claim 21, wherein there are provided abutment stops on the body of the carriage, engaged by a movable part of the suspension whereby to determine the maximum excursion travel of a wheel suspension;

Regarding claim 22, wherein the abutment stops are adjustable whereby to adjust the maximum excursion position of a wheel;

Regarding claim 23 wherein the body of the carriage includes or comprises at least one elongate plate-like member on which a plurality of individual wheel suspensions are carried with the wheels in-line with one another;

Regarding claim 24, wherein the wheels are arranged in-line with one another along the body of the carriage in a single line; and

Regarding claim 26, wherein the carriage is secured, fixed and attached to a boot for receiving and supporting the foot of a user.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7, 8, 10-14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al.

Burns et al. figure 2 (see attached marked-up copy of figure 2) discloses the claimed device, including, in regards to claim 11, wherein the wheel is carried by one arm thereof via an axle and a bearing permitting the wheel to rotate with respect to the resilient member; and in regards to claim 18, wherein each pivoted trailing arm houses a respective resilient member urging the arm to turn in a first direction about a first axis with respect to the carriage body; except for the following:

Regarding claim 7, wherein the resilient action of the suspension is exerted by a compression spring;

Regarding claim 8, wherein the compression spring is a coil of metal or plastics;

Regarding claim 10, wherein the resilient suspension includes a leaf spring;

Regarding claim 11, wherein the leaf spring is generally U-shape;

Regarding claims 12 and 18, wherein the resilient action of the suspension is exerted by a torsion spring;

Regarding claim 13, wherein the torsion spring is a coil spring in torsion;

Regarding claim 14, wherein the torsion spring is a helical or spiral coil spring.

Burns et al. further teaches in column 4, lines 62+, that it is known in the art to substitute elastomeric members "with other types of shock absorbing devices such as, for example, mechanical springs or dampers" to vary the type and amount of shock

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absorption. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the roller skate carriage of Burns et al. figure 2 with the mechanical springs and dampeners as further taught by Burns et al., in order to vary the type and amount of shock absorption.

10. Claims 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al. figure 2.

Regarding wherein the resilient member is a compression spring, metal or plastic coil, a chamber of compressed gas with a piston sealingly displaceable within it, a leaf spring, a u-shaped leaf spring, a torsion spring, a coil spring in torsion or a helical or spiral coil spring, it would have been an obvious design modification to utilize any of these spring types as a substitute equivalent for and "elastomeric member" because, at the time of the invention, the use of each of these types of resilient members was known in the art as a conventional form of shock absorption to perform the same function as an "elastomeric member". It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the carriage of Burns et al. figure 2 with any of the previously listed resilient members as a matter of design modification to provide efficient and inexpensive shock absorption.

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al. figure 2 in view of Hornsby (US Patent 3,951,422).

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Burns et al. figure 2 discloses the claimed device except wherein the wheels are arranged in co-axial pairs on the body of the carriage. Hornsby discloses in figures 1-4 that it is known in the art to provide a roller skate carriage (12) with wheels (28 and 27) arranged in co-axial pairs (see figures 1 and 3) on the body of the carriage to provide improved stability for a user. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the skate carriage of Burns et al. figure 2 with the co-axial paired wheels of Hornsby, in order to provide improved stability for a user.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Berta (US Patent 4,351,538); Zorzi et al. (US Patent 5,709,396); Loertz, Jr. (US Patent 2,552,987); Lazarevich et al. (US Patent 5,704,621); Lutz (US Patent 277,911); and Wheat (US Patent 4,272,090); disclose skate carriages with resilient suspensions where the path of movement of the wheel upon displacement is non-linear. Ho (US Patent 5,566,957) discloses a skate carriage with single arms supporting the wheels. Nelson (US Patent 5,486,011); Christianson (US Patent 4,152,001); and Hornsby (US Patent 3,951,422) disclose, respectively, a leaf spring, a U-shaped leaf spring, and a chamber of compressed gas with a piston to absorb shock.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elaine Gort whose telephone number is (703)308-6391. The examiner can normally be reached on Monday through Thursday from 7:00 am to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson, can be reached at (703)308-0885. The fax phone number for the organization where this application or processing is assigned is (703)308-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-1113.

EG



January 23, 2001


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600
1/29/01

ELONGATE PLATE-LIKE MEMBER
SOLE PLATE OF CARRIAGE

BOOT

ABUTMENT STOPS
FIXED PART
OF CARRIAGE

FIG. 2

FIRST AXIS &
PIVOT

RESILIENT
SUSPENSION

ADJUSTABLE
ABUTMENT
STOP

CARRIAGE

Non-linear
deflection

AXLE
&
BEARINGS

ADJUSTMENT
TO VARY
POSITION
& RESILIENCY

PIVOT
ARM

MEANS
FOR
CONSTRAINING
&
TRAINING
ARM

FIRST DIRECTION

